

REMARKS

The enclosed is responsive to the Examiner's Office Action mailed on December 22, 2008. Claims 19-23 are pending in this application. Claims 19-20 and 23 have been amended. No claims have been canceled or added. Applicants have amended the claims to clarify the subject matter claimed. Support for the amendments can be found in the specification as originally filed, e.g., in Fig. 2 and paragraph [0027], page 10. No new matter has been added. Applicants respectfully request reconsideration of this application as amended.

Objections to the Specification

The Office Action objected to paragraph [0019] as containing a confusing run-on sentence. Applicants have amended the paragraph to correct typographical errors and submit that the objection has been overcome. No new matter has been added as a result of this amendment.

Claim Objections

The Office Action objected to claim 23 because of the following informalities: Claim 23 recites "packet date" instead of "packet data." Applicants have amended claim 23 to correct this typographical error. No new matter has been added.

35 U.S.C. 112 Rejections

The Examiner rejected claim 23 under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. Applicants have amended claim 23 to clarify the rejected language and respectfully submit that this rejection has been overcome.

The Examiner rejected claims 19-23 under 35 U.S.C 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicants have amended the claims to clearly recite "packet header data" and "packet

payload data" consistently throughout the claims. Accordingly, Applicants submit that the rejection of the claims has been overcome.

35 U.S.C. 103(a) Rejections

Claims 19-20 and 23 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Lincoln et al., (U.S. Patent No. 6,829,240; hereinafter "Lincoln") in view of Leger et al., (U.S. Patent No. 5,771,356; hereinafter "Leger"). Lincoln qualifies as prior art only under 35 U.S.C. § 102(e) because it was published/issued after Applicants' effective filing date. Applicants do not admit that Lincoln is prior art and reserves the right to challenge the reference at a later date.

Lincoln describes a system and method for segmenting and reassembling cells of streaming data. In particular, Lincoln describes combining cell payloads from a host memory with a header from a control memory. (Lincoln, col. 4, lines 43-54).

Leger describes data transfer management for a first-in first-out (FIFO) buffer. In particular, Leger describes circular address pointers to keep track of the loading and unloading of data to/from the FIFO and a FIFO level calculator to determine the amount of full/empty space in the FIFO. (Leger, col. 6, lines 42-57).

Applicants respectfully submit that the combination of Lincoln and Leger fails to disclose:

first circuitry to generate a packet based on
**packet header data received from and generated
by a micro-engine** and packet payload data from a
memory controller, wherein the packet payload data
bypasses the micro-engine.

(Claim 19) (emphasis added).

In contrast, Lincoln describes a segmentation state machine reading a packet header from a control memory. Lincoln is silent regarding the generation of the packet header. It is respectfully submitted that the segmentation state machine and/or control memory is not the equivalent of the claimed micro-engine. Leger only describes a FIFO and is silent regarding generating a packet based on packet header data received from

and generated by a micro-engine and packet payload data from a memory controller.

Additionally, the combination of Lincoln and Leger fails to disclose:

third circuitry to track a start lane in the FIFO circuitry indicating a start of free space in the FIFO circuitry, and **to determine a starting lane for the packet payload data such that alignment of the packet payload data matches the start lane in the FIFO circuitry.**

(Claim 19) (emphasis added).

In contrast, Lincoln states that the FIFO “maintains cell alignment by transferring a cell payload only when there is at least one (1) complete cell (or any specified number of cells other than one (1)) at the start of a transfer from the address in the FIFO.” (Lincoln, col. 9, lines 12-16). In other words, Lincoln maintains alignment by transferring cell payloads in set amounts. Lincoln does not disclose determining a starting lane for the packet payload data such that alignment of the packet payload data matches the start lane in the FIFO circuitry. The Office Action alleges that Lincoln describes a start lane with “FIFO address 193.” In contrast, however, FIFO address 193 provides the location in host memory, not in the FIFO, where the payload data is found. (Lincoln, col. 7, lines 49-54). Lastly, Leger describes pointers to either end of a FIFO, but does not describe aligning the starting lane for packet payload data with the start lane in the FIFO.

Accordingly, for at least the reasons set forth above, Applicants submit that the rejection of claim 19 has been overcome.

Given that claim 20 is dependent upon claim 19, and includes additional features, Applicants submit that the rejection of claim 20 has been overcome for at least the same reasons as above.

Claim 23, while different from claim 19, contains similar features to those discussed above. Accordingly, Applicants submit that the rejection of claim 23 has been overcome for at least the same reasons as above.

Claim 21 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Lincoln in view of Leger in further view of An et al., (U.S. Patent No. 6,061,361; hereinafter "An").

Given that claim 21 is dependent upon claim 19 and includes additional features, and given that An fails to remedy the shortcomings of Lincoln and Leger discussed above, Applicants respectfully submit that the rejection of claim 21 has been overcome for at least the same reasons as above.

Claim 22 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Lincoln in view of Leger in further view of Cherukuri (U.S. Patent No. 5,878,217; hereinafter "Cherukuri").

Given that claim 22 is dependent upon claim 19 and includes additional features, and given that Cherukuri fails to remedy the shortcomings of Lincoln and Leger discussed above, Applicants respectfully submit that the rejection of claim 22 has been overcome for at least the same reasons as above.

Claim 23 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Lincoln in view of Leger in further view of Vogel (U.S. Patent No. 6,839,352; hereinafter "Vogel").

The Office Action includes Vogel in this rejection to address the previously submitted claim language of generating a packet header based on the payload data. Applicants have amended claim 23 to remove this claim feature. Furthermore, Vogel fails to disclose generate a packet based on packet header data received from and generated by a micro-engine and packet payload data from a memory controller. Given that Vogel fails to remedy the shortcomings of Lincoln and Leger discussed above, Applicants respectfully submit that the rejection of claim 23 has been overcome.

CONCLUSION

Applicant respectfully submits that all objections and rejections have been overcome.

If there are any additional charges, please charge them to our Deposit Account Number 02-2666. If a telephone conference would facilitate the prosecution of this application, the Examiner is invited to contact Ryan Elliott at (408) 720-8300.

Respectfully submitted,
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